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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/826,917

04/16/2004

Chiaki Aoyama

IIP-117-A

2272

21828

7590

08/17/2006

CARRIER BLACKMAN AND ASSOCIATES
24101 NOVI ROAD
SUITE 100
NOVI, MI 48375

EXAMINER

REPKO, JASON MICHAEL

ART UNIT

PAPER NUMBER

2628

DATE MAILED: 08/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|--------------------------|------------------------|---------------------|--|
| Interview Summary | Application No. | Applicant(s) | |
| | 10/826,917 | AOYAMA, CHIAKI | |
| | Examiner | Art Unit | |
| | Jason M. Repko | 2628 | |

All participants (applicant, applicant's representative, PTO personnel):

- (1) Jason M. Repko. (3) Kelly McGlasner.
 (2) Joseph Carrier. (4) _____.

Date of Interview: 06 August 2006.

Type: a) ☒ Telephonic b) ☐ Video Conference
 c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.
 If Yes, brief description: _____.

Claim(s) discussed: 1 and 2.

Identification of prior art discussed: U.S. Patent No. 6,028,606 to Kolb et al. and Mora et al, "A New Object-Order Ray-Casting Algorithm," ...

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.


 Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant argued the Kolb et al reference does not cure the deficiencies of the Noyama et al reference with respect to claim 1. Specifically, lines 5-7 of claim 1 are not taught by the Kolb et al reference. Examiner disagreed with this assertion, citing lines 39-49 of column 2 and lines 37-40 of column 5 as further evidence in support of the rejection presented in the Office Action. No agreement was reached. Figure 2 of the Mora et al reference was discussed with respect to the rejection of claim 2. No agreement was reached

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Applicant Initiated Interview Request Form

Application No.: 10/826,917 First Named Applicant: Aoyama
Examiner: Repko Art Unit: 2628 Status of Application: Final

Tentative Participants:

(1) EXR. Repko (2) Kelly McGlashen }
(3) _____ (4) Joseph Carrier } applicant's representatives

Proposed Date of Interview: 8/9/2006 Proposed Time: 2 (AM/PM)

Type of Interview Requested:

(1) ☒ Telephonic (2) ☐ Personal (3) ☐ Video Conference

Exhibit To Be Shown or Demonstrated: ☐ YES ☒ NO

If yes, provide brief description: _____

Issues To Be Discussed

| Issues (Rej., Obj., etc) | Claims/ Fig. #s | Prior Art | Discussed | Agreed | Not Agreed |
|--|--------------------|----------------------|--------------------------|--------------------------|--------------------------|
| (1) <u>103 rej</u> | <u>1,6-7,10</u> | <u>Noyama + Kolb</u> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (2) _____ | _____ | _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (3) _____ | _____ | _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (4) _____ | _____ | _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> Continuation Sheet Attached | | | | | |

Brief Description of Arguments to be Presented:

Please see attached sheet

An interview was conducted on the above-identified application on _____.

NOTE: This form should be completed by applicant and submitted to the examiner in advance of the interview (see MPEP § 713.01).

This application will not be delayed from issue because of applicant's failure to submit a written record of this interview. Therefore, applicant is advised to file a statement of the substance of this interview (37 CFR 1.133(b)) as soon as possible.

Applicant/Applicant's Representative Signature _____

Examiner/SPE Signature _____

Typed/Printed Name of Applicant or Representative _____

Registration Number, if applicable _____

This collection of information is required by 37 CFR 1.133. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Attorney Docket No.: IIP-117-A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Chiaki Aoyama
 Serial No.: 10/826,917
 Filed: April 16, 2004
 Group Art Unit: 2671
 Examiner: Repko, Jason Michael
 Confirmation No.: 2272
 Title: **METHOD, APPARATUS AND PROGRAM FOR
 COMPOSITING IMAGES, AND METHOD,
 APPARATUS AND PROGRAM FOR RENDERING
 THREE-DIMENSIONAL MODEL**

**APPLICANT INITIATED INTERVIEW REQUEST
 BRIEF DESCRIPTION OF ARGUMENTS**

As regards the rejection of claims 1, 6-7 and 10, we respectfully disagree that Noyama discloses defining lines of sight so that each of the lines of sight conforms with a ray of light incident on a pixel corresponding thereto of the picture taken by the camera, as claimed. In the method of Noyama, the rays are traced starting from the viewpoint until the color of the pixel is determined. That is, the ray tracing starts from the eye 16 and continues along a straight line connecting the eye 16 and the pixel being processed on the projection plane until striking an object 12. Attribute data of the location of intersection of the ray with the object is obtained and stored. We note that this procedure is performed on the 3-D model to generate the 2-D CG image, and thus is performed completely independently of, and without reference to, the natural image 30, and without consideration of how the natural image is formed (ie, camera angle relative to the ground, lighting, etc). Thus, Noyama does not define lines of sight in consideration of the picture taken by the camera, or natural image. In the disclosure of Noyama, neither the natural image 30 or the data associated with the natural image are used in generation of the 2-D CG image, but instead, after the 2D image is formed, information from the 2D image is combined with the natural image to form the composite image 50. In contrast, the applicant discloses pre-determining the directions of rays of light incident on pixels of an image plane of the camera and correlating them to pixel positions in a frame of the picture taken by the camera. The lines of sight for tracing for use in obtaining attributes (ie, color) of the 3-D model on the projection pixels are made to conform to a ray of light incident on the pixel of the image plane of the camera corresponding to the projection pixel.

We respectfully disagree that the modification of Noyama by the disclosure of Kolb cures the deficiencies of Noyama as described above. Upon review of Kolb, we find that Kolb discloses a camera simulation system (ie, camera-based models) to synthesize a 2-D image from data representing a 3-D scene for the purpose of rendering images which are more realistic and closely resemble images created with a camera

system. Thus Kolb provides a method of modeling a physical camera, including specified lens, aperture configuration, shutter setting, and film surface, the model used to generate a 2-D image.

In the rejection, the Examiner states that Kolb discloses a function to define lines of sight extending from the viewpoint to projection pixels on the plane of projection so that each of the lines of sight conforms with a ray of light incident on a pixel corresponding thereto of the picture taken by the camera (col. 12, lines 57-59). However, we disagree that the camera disclosed by Kolb corresponds to the camera recited by the applicant in claim 1. That is, the camera disclosed by Kolb refers to the physical model of the camera which is used to acquire the 2-D image of the 3-D model.

In contrast, in the applicant's claimed invention, the limitation "the picture taken by the camera" refers to a second image, specifically the non-CG image obtained from a camera that is to be combined with the rendered 2-D image.

At item 36 of the Office Action (Response to Arguments), the Examiner notes that the Kolb method creates an image which approximates an image produced by the physical camera. However, we respectfully assert that Kolb does not disclose the claimed limitation in which lines of sight are defined so that each of the lines of sight conforms with a ray of light incident on a pixel corresponding thereto of the picture taken by the camera, particularly the camera which was used to obtain the picture. Generating a 2-D image using a simulated camera, as disclosed by Kolb, is not equivalent to generating a 2-D image by conforming the attributes of the 2-D image to those of a separate image.

Thus neither Noyama nor Kolb, alone or in combination, suggest or disclose a method, apparatus or program for compositing a computer-graphics image and a picture taken by a camera comprising defining lines of sight extending from the viewpoint to projection pixels on the plane of projection so that each of the lines of sight conforms with a ray of light incident on a pixel corresponding thereto of the picture taken by the camera, as claimed.